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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/601,614	06/23/2003	Todd Thomas	506422-0112	8806

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EXAMINER	
ADDIE, RAYMOND W	

ART UNIT	PAPER NUMBER
3671	

DATE MAILED: 08/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/601,614	THOMAS ET AL.	
	Examiner	Art Unit	
	Raymond W. Addie	3671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *25-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *25-38 and 42-45* is/are rejected.

7)☒ Claim(s) *39-41* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. In view of the Appeal Brief filed on 6/26/06, PROSECUTION IS HEREBY REOPENED. A new grounds of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31. A new notice of appeal fee and appeal brief fee will not be required for applicant to appeal from the new Office action. Any appeal brief filed on or after September 13, 2004 must comply with 37 CFR 41.37.

Claim Objections

2. Claims 27, 29 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 27, 29 are objected to because the claims do not further define how or what is being tested during performance of the method claimed. Therefore Claims 27, 29 do not further limit the subject matter of claim 26 or the independent claim 25, form which they depend respectively.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 28 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 28 requires a "resilient modulus" to be tested using the stability test recited in claim 26. However, there is no description in the specification as to how a "resilient modulus" of a paving material mixture is tested using the disclosed Marshall Stability Test. Further, it does not appear as though the Marshall Stability Test is capable of testing the --Modulus of Resiliency-- of any material.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 27, 29, 44 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 27, 29 both recite the method step of: "testing modulus of said proposed asphalt emulsion mixture; and selecting said...mixture to be used...after testing modulus of said proposed asphalt emulsion mixture". But does not recite what, or which modulus is to be tested.

Therefore, one of skill in the art, would not know how to use the method claimed, since testing for different physical properties of a composition require different test equipment.

In order to distinctly claim a method, the actual claim language must particularly point out how necessary steps of the method are to be performed.

In this case, the claims are indefinite, because the actual claim language does not identify which physical property is to be tested. Hence, one of skill in the art would not know how to perform the method, as claimed.

Regarding claim 44, the phrase "or other surface treatment" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "or other surface treatment"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 45 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Wirtgen # 5,741,085.

Wirtgen discloses a reconstructed, paved road comprising reclaimed asphalt pavement particles and an asphalt emulsion. Therefore, it would have been obvious if not inherent Wirtgen discloses a paved road formed by a method using (RAP) and asphalt emulsion. See Abstract.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 25, 26, 27, 29, 30-32 34-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wirtgen # 5,741,085 in view of Bond et al. # 6,203,606.

Wirtgen discloses a method of selecting an asphalt emulsion mixture. The mixture intended to be used for reconstructing a paved road. See Col. 1, In. 62-col. 2, In. 2. Wirtgen further discloses it is known to mill(scarify) a top section of an old roadway, to be recycled; mixing necessary additives with the milled particles (RAP); and use the mixture to immediately form a new roadway surface. See col. 1, Ins. 16-24

The method of selecting a preferred mixture comprising the steps of:

Providing reclaimed asphalt pavement (RAP) particles. See col. 2, Ins. 3-14.

Testing the composition of said RAP particles, to determine additives needed for immediate recycling of said RAP. See Col. 2, Ins. 37-40.

Selecting preferred additives, such as emulsion, for recycling said RAP into a paved roadway. See Col. 2, Ins. 41-45

Mixing said emulsion and RAP to form a recycled asphalt pavement, ready for use. See col. 2, Ins. 60-67; Col. 3, Ins. 15-21; Col. 4, Ins. 25-34.

What Wirtgen does not disclose is testing the recycled asphalt mixture after mixing, and before use.

However, Bond et al. teaches methods of forming performance grade asphalts and methods of testing asphalt mixture stability, for use in forming paved roads. The method of selecting a preferred mixture for intended use comprising the steps of:

Providing recycled or waste products, for re-use in forming an asphalt mixture, such as asphaltic binders, stone, sand, etc., to produce a road asphalt.

Testing the individual constituents for moisture susceptibility and raveling.

Mixing the constituents to form a proposed asphalt mixture.

Testing the blended mixture for moisture susceptibility and raveling.

Selecting a final blended mixture, from at least two proposed mixtures, that have been tested for moisture susceptibility and raveling. The selected mixture, intended to be used for forming a paved roadway.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to, test the mixed paving materials of Wirtgen, with a moisture susceptibility and raveling test, as taught by Bond et al., in order to form a premium Performance Grade (PG) asphalt from recycled materials, thereby lowering the cost of the paving material. See Col. 3, Ins. 5-23.

In regards to claims 29, 30 Wirtgen discloses essentially all that is claimed with respect to claim 25 above, to include sampling and testing sections of old roadway for recycling

into a newly paved roadway, insitu. What Wirtgen does not disclose is testing the resilient modulus of the mixed RAP and asphalt emulsion. However, Bond et al. teaches it is known to test recycled paving materials in a gyratory compactor.

Gyratory compactors are known in the art to conduct a "raveling test", which tests the resilient modulus of a material and thus, its resistance to rutting. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide the method of selecting an asphalt paving material of Wirtgen, with the step of using a raveling test to determine the paving materials resistance to rutting, as taught by Bond et al., in order to achieve optimum compositions for use as paved roadways. See Wirtgen Col. 4, Ins. 64-col. 5, In. 4; Bond et al. Col. 5.

In regards to claims 31, 32 Bond et al. teaches testing the stability of the paving material, over a wide temperature range, utilizing a penetration and/or a ductility test. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide the method of selecting a paving material for use in paving roads of Wirtgen, with the step of testing the paving material after mixing, for stability and resistance to thermal cracking, as taught by Bond et al., in order to form the most optimal paving material for ambient road requirements.

In regard to claims 34, 36-38 Wirtgen discloses taking samples of said road to be recycled. Crushing said samples and using said crushed samples to make said reclaimed asphalt pavement particles. Wherein, said samples are representative of variations in the road. What Wirtgen does not disclose is testing multiple formulations of paving material to determine the optimum composition for paving roadways. However, Bond et al. teaches formulating and testing at least two (a conventional PG concrete) and the RAP and emulsion formulation of the patented invention to compare performance of each formulation and the cost of materials. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide the method of selecting a paving material, of Wirtgen, with the step of testing at least two compositions for use in paving a roadway, as taught by Bond et al., in order to determine the optimum composition for paving roadways.

In regards to claim 35, Although Wirtgen does not explicitly recite "inspecting said samples to determine the composition of layers in said samples, the thickness of said layers and variations between samples". Wirtgen does positively recite "Onto gravel layer (1) bituminous layers are applied which...have to be repaired...By sampling and analysis of the old road surface performed before the recycling process, the composition of it was exactly determined". Hence, it is obvious Wirtgen discloses the step of inspecting the samples and determining the exact composition of said roadway sample.

In regards to claims 39-41 Wirtgen discloses essentially all that is claimed, with respect to claim 25, to include optimum compositions of the cold-recycled layers are obtained so that...the cold recycling process fulfills all the requirements of modern road traffic. What Wirtgen does not disclose is the "critical cracking temperature" of the paving mix. However, Bond et al. teaches it is known to test paving materials with a moisture susceptibility test, and that "an ideal asphalt is stiff enough to resist compacting or rutting from heavy highway loads during high...temperatures, while having a high enough tensile strength to not be brittle under those same heavy loads during very low ambient temperatures...the ability to drop the lower end of the PG range(temperature) is more critical than raising the upper end of the (temperature) range". Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to test the moisture susceptibility of the paving material of Wirtgen, with a moisture susceptibility test, as taught by Bond et al., in order to select a paving material that will perform sufficiently, to accommodate heavy loads in both hot and cold weather, as taught by Bond et al., in order to provide an optimum paving material for the intended application. See Bond et al. Col. 1, ln. 33-col. 2, ln. 42.

In regards to claims 42-44 Wirtgen discloses a method of reconstructing a paved road, comprising the steps of:

Forming a proposed asphalt emulsion mixture from RAP particles and a bitumen emulsion.

Selecting an asphalt emulsion mixture to be used for reconstructing said paved road.

Removing pavement from said road, of up to 40cm; to form reclaimed asphalt particles (RAP), leaving at least a lower layer of asphalt in place upon a bed of gravel (1).

Mixing said RAP with emulsion to form an "optimal asphalt paving material" (3).

Applying said optimal asphalt paving material (3) to said lower layer of asphalt, not removed; so as to form a cold in-place recycling layer on said road (2).

Inspecting said road (2) to determine if said road is thick enough to leave a desired amount of base material after removing up to 40 cm of bituminous layers (2).

Applying to said "optimal cold in place recycling layer (3) a wearing surface (4) of bituminous overlay.

What Wirtgen does not disclose is the step of testing the mixed RAP and emulsion for performance. See Col. 4, ln. 50-Col. 5, n. 4.

However, Bond et al. teaches methods of forming performance grade asphalts and methods of testing asphalt mixtures for use in forming paved roads. The method of selecting a preferred mixture for intended use comprising the steps of:

Providing recycled or waste products, for re-use in forming an asphalt mixture, such as asphaltic binders, stone, sand, etc., to produce a road asphalt.

Testing the individual constituents for moisture susceptibility and raveling.

Mixing the constituents to form a proposed asphalt mixture.

Testing the blended mixture for moisture susceptibility and raveling.

Selecting a final blended mixture, from at least two proposed mixtures, that have been tested for moisture susceptibility and raveling. The selected mixture, intended to be used for forming a paved roadway.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to, test the mixed paving materials of Wirtgen, with a moisture susceptibility and raveling test, as taught by Bond et al., in order to form a premium Performance Grade (PG) asphalt from recycled materials, thereby lowering the cost of the paving material. See Col. 3, lns. 5-23.

7. Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wirtgen # 5,741,085 in view of Bond et al. # 6,203,606 as applied to claim 25 above, and further in view of Kai et al. # 4,532,271.

Wirtgen in view of Bond et al., disclose essentially all that is claimed, to include performance testing of paving materials before and after mixing constituent components of said paving materials, to include testing for resistance to rutting, moisture susceptibility, ductility, and softening point. See Bond et al., Col. 1, ln.10-col. 2, ln. 19. What Wirtgen in view of Bond et al. do not disclose is whether or not the "resilient modulus" of the paving material is tested. However, Kai et al., teaches it is known to test paving materials for raveling, resistance to plastic flow and other essential characteristics of the paving material by utilizing a Marshall stability test, a raveling test

and a wheel tracking test. The method comprising the steps of mixing paving material with an emulsion. Reserving a portion of the mixture for a Marshall stability test. Therefore, it would have been obvious to one of ordinary skill in the art to test the paving material of Wirtgen in view of Bond et al., with the step of applying at least a stability test to the paving material, as taught by Kai et al., in order to determine if the paving material is suitable for the intended application. See Col. 9, Ins. 20-26.

8. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wirtgen # 5,741,085 in view of Bond et al. # 6,203,606 as applied to claim 25 above, and further in view of Burdick 6,359,040 B1.

Wirtgen in view of Bond et al., disclose essentially all that is claimed, to include the use of an emulsion. What Wirtgen in view of Bond et al., do not disclose is the recitation of using a cationic emulsion. However, Burdick teaches it is known that paving compositions are provided enhanced yield strength and enhanced viscosity by use of cationic emulsions to reformulate the RAP being recycled into new paving materials. See Abstract and col. 27. Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to provide the method of selecting a paving material for use, of Wirtgen in view of Bond et al., with the step of using a cationic emulsion, as taught by Burdick, in order to improve stability of the RAP.

Response to Arguments

9. Applicant's arguments with respect to claims 25-45 have been considered but are moot in view of the new ground(s) of rejection.

Further, Claim 45 is in the form of a product by process claim, which has been examined in accordance with MPEP 2113, Product-by-Process Claims, wherein, Even though the product by process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of the product does not depend on its method of production. If the product in the product by process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. See *In re Thorpe 777F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).*

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. GB 233567 A, specifically teaches performance testing asphalt compositions for Stability, Moisture susceptibility, and resilient modulus values, using a tensile strength test and dynamic impact loading.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond W. Addie whose telephone number is 571 272-6986. The examiner can normally be reached on 6AM-2:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will can be reached on 571 272-6998. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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8/9/06